

Substitute for forms 1449A/PTO & 1449B/PTO		ATTORNEY'S DKT NO. 030708-035	APPLICATION NO. 09/403,724
FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Sonderegger	
		FILING DATE Dec. 20, 1999	GROUP 1646

SEP 26 2003

PATENT &amp; TRADEMARK OFFICE

## U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes No

RECEIVED  
TECH CENTER 1600  
SEP 3 3 2003

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	M. Bach et al., "Impairment of Spatial but Not Contextual Memory in CaMKII Mutant Mice with a Selective Loss of Hippocampal LTP in the Range of the $\theta$ Frequency", <i>Cell</i> , Vol. 81, 905-915 (June 16, 1995), Cell Press, Cambridge, Mass. USA
	S. Bao et al., "Cerebellar Cortical Inhibition and Classical Eyeblink Conditioning", <i>PNAS</i> , (Feb. 5, 2002) Vol. 99, No. 3, 1592-1597, National Academy of Sciences, Washington DC USA
AC	D. Baranes et al., "Tissue Plasminogen Activator Contributes to the Late Phase of LTP and to Synaptic Growth in the Hippocampal Mossy Fiber Pathway", <i>Neuron</i> , Vol. 21, 813-823 (October 1998), Cell Press, Cambridge, Mass. USA
	H. Beck et al., "Synaptic Plasticity in the Human Dentate Gyrus", <i>The Journal of Neuroscience</i> (September 15, 2000), Vol. 20, No. 18, 7080-7086, Society for Neuroscience, Washington DC, USA
	R. Bejar et al., "Transgenic Calmodulin-Dependent Protein Kinase II Activation: Dose-Dependent Effects on Synaptic Plasticity, Learning, and Memory", <i>The Journal of Neuroscience</i> , Vol. 22, No. 13, 5719-5726 (July 1, 2002), Society for Neuroscience, Washington DC, USA
	T.V.P. Bliss et al., "Long-Lasting Potentiation of Synaptic Transmission in the Dentate Area of the Anaesthetized Rabbit Following Stimulation of the Perforant Path", <i>J. Physiol.</i> (1973), Vol. 232, 331-356, Cambridge University Press, Cambridge England
	P. Calabresi et al, "Tissue Plasminogen Activator Controls Multiple Forms of Synaptic Plasticity and Memory", <i>European Journal of Neuroscience</i> , Vol. 12, 1002-1012 (2000), European Neuroscience Association, Paris Blackwell Science, Paris France

Substitute for forms 1449A/PTO & 1449B/PTO		ATTORNEY'S DKT No. 030708-035	APPLICATION NO. 09/403,724
<b>FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		APPLICANT Sonderegger	
		FILING DATE Dec. 20, 1999	GROUP 1646

SEP 26 2003

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	D. Centonze et al., "Tissue Plasminogen Activator is Required for Corticostriatal Long-Term Potentiation", <i>European Journal of Neuroscience</i> , Vol. 16, 713-721 (2002), Paris Blackwell Science, Paris France		
	Zu-Lin Chen et al, "Neuronal Death in the Hippocampus is Promoted by Plasmin-Catalyzed Degradation of Laminin", <i>Cell</i> , Vol. 91, 917-925 (December 26, 1997) Cell Press, Cambridge, Mass, USA		
	Zu-Lin Chen et al., "Expression and Activity-Dependent Changes of a Novel Limbic-Serine Protease Gene in the Hippocampus", <i>The Journal of Neuroscience</i> (July 1995) Vol. 5, No. 7, 5088-5097, Society for Neuroscience, Washington DC, USA		
	O. Dery et al., "Proteinase-Activated Receptors: Novel Mechanisms of Signaling by Serine Proteases", <i>Invited Review</i> , C1429-C1452 (1998) American Physiological Society, Bethesda, MD, USA		
	M. Dihnhich et al., "Prothrombin mRNA is Expressed by Cells of the Nervous System", <i>Neuron</i> , Vol. 6, 575-581 (April 1991), Cell Press, Cambridge Mass., USA		
OC	A. Endo et al., "Proteolysis of Neuronal Cell Adhesion Molecule by the Tissue Plasminogen Activator - Plasmin System after Kainate Injection in the Mouse Hippocampus", <i>Neuroscience Research</i> , Vol. 33, 1-8 (1999) Elsevier, Amsterdam, Holland		
	B. Faraut et al., "Thrombin Downregulates Muscle Acetylcholine Receptors Via an IP3 Signaling Pathway by Activating its G-Protein-Coupled Protease-Activated Receptor", <i>Journal of Cellular Physiology</i> , 196:105-112 (2003) Wiley-Liss, Inc., New York USA		
	P. Frankland et al., " $\alpha$ -CaMKII-dependent Plasticity in the Cortex is Required for Permanent Memory", <i>Letters to Nature</i> , Vol. 411, 309-313 (May 2001) Macmillan Magazines Ltd.		
	U. Frey et al., "A Different Form of Long-Lasting Potentiation Revealed in Tissue Plasminogen Activator Mutant Mice", <i>The Journal of Neuroscience</i> (March 15, 1996) Vol. 16, No. 6, 2057-2063, Society for Neuroscience, Washington DC, USA		
	Gerren, R.A., Weinberger, N.M. "Long-term Potentiation in the Magnocellular Medial Geniculate nucleus of the Anaesthetized Cat" (1983) <i>Brain Res.</i> 265: 138-142, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland		
	Gingrich, M.B. et al. "Potentiation of NMDA Receptor Function by the Serine Protease Thrombin" (2000) <i>J. Neurosci.</i> 20:4582-4595, Society for Neuroscience, Washington DC, USA		
	Goosens, K.A. et al. "Long-term Potentiation as a Substrate for Memory: Evidence From Studies of Amygdaloid Plasticity and Pavlovian Fear Conditioning" (2002) <i>Hippocampus</i> 12: 592-599, Wiley, New York, USA		
	Gschwend, T.P. et al. "Neurotrypsin, a Novel Multidomain Serine Protease Expressed in the Nervous System" (1997) <i>Molec. Cell. Neurosci.</i> 9: 207-219, Academic Press, San Diego, CA USA		
OC	Hirata, A. et al. "Abnormalities of synapses and neurons in the hippocampus of neuropsin-deficient mice" (2001). <i>Mol. Cell. Neurosci.</i> 17:600-610, Academic Press, San Diego, CA USA		

RECEIVED  
JULY 2003  
USPTO

Substitute for forms 1449A/PTO & 1449B/PTO	ATTORNEY'S DKT NO. 030708-035	APPLICATION NO. U9/403,724
<b>FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	APPLICANT Sonderegger	FILING DATE Dec. 20, 1999
		GROUP 1646

SEP 26 2013 AB

## **NON PATENT LITERATURE DOCUMENTS**

Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

	Huang, Y.Y. "Mice Lacking the Gene Encoding Tissue-type Plasminogen Activator Show a Selective Interference with Late-phase Long-term Potentiation in Both Schaffer Collateral and Mossy Fiber Pathways" (1996) <i>Proc. Natl. Acad. Sci. USA</i> 93: 8699-8704, National Academy of Sciences, Washington, DC, USA
	Kim, J.J. et al. "Cerebellar Circuits and Synaptic Mechanisms Involved in Classical Eyeblink Conditioning" (1997) <i>Trends Neurosci.</i> 20: 177-181, Elsevier Applied Science Publishing, Barking, England
	Komai, S. et al. "Neuropsin Regulates an Early Phase of Schaffer-collateral Long-term Potentiation in the Murine Hippocampus" (2000) <i>Eur. J. Neurosci.</i> 12: 1479-1486, Blackwell Science, Paris, France
	Laroche, S. et al "Long-term Potentiation in the Prefrontal Cortex Following Stimulation of the Hippocampal CA1 Subiculum Region" (1990) <i>Neurosci. Lett.</i> 114: 184-190, Elsevier Scientific Publishers, Limerick, Ireland
OC	Lee, K.S. "Sustained Enhancement of Evoked Potentials Following Brief, High Frequency Stimulation of the Cerebral Cortex in vitro" (1982) <i>Brain Res.</i> 239: 617-623, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland
	Lewis, D. and Teyler, T.J. (1986). Long-term potentiation in the goldfish optic tectum in vitro. <i>Brain Res.</i> 375: 246-250, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland
	Lisman, J. et al. "The Molecular Basis of CaMKII Function in Synaptic and Behavioral Memory" (2002) <i>Nat. Neurosci.</i> 3: 175-190, Nature Publishing Group, New York, USA
	Liu, Y. "Proteolytic Activity, Synapse Elimination, and the Hebb synapse" (1994) [Review]. <i>J. Neurobiol.</i> 25: 325-335, Wiley-Interscience, New York USA
	Luthi, A., Laurent, et al. "Hippocampal Long-term Potentiation and Neural Cell Adhesion Molecules L1 and NCAM" (1994) <i>Nature</i> 372: 777-779, Nature Publishing Group, London, England
	Macfarlane, S.R., et al. "Proteinase-activated Receptors" (2001) <i>Pharmacol. Rev.</i> 53: 245-282, Amer. Soc. For Pharmacology & Experimental Therapeutics, Bethesda, MD, USA
	Madani, R. et al. "Enhanced Hippocampal Long-Term Potentiation and Learning by Increased Neuronal Expression of Tissue-type Plasminogen Activator in Transgenic Mice" <i>EMBO Journal</i> 18: 3007-12, Oxford University Press, Oxford, England , 1999
	Malenka, R.C. and Nicoll, R.A. (1999). Long-term Potentiations - A Decade of Progress. <i>Science</i> 285: 1870-1874, Amer. Assn. For the Advancement of Science, Washington, DC, USA
	Maren, S. et al. "Synaptic Plasticity in the Basolateral Amygdala Induced by Hippocampal Formation Stimulation in vitro" (1995) <i>J. Neurosci.</i> 15: 7548-7564, Society for Neuroscience, Washington DC, USA
	Martin, S.J. et al. "New Life in an Old Idea: The Synaptic Plasticity and Memory Hypothesis Revisited" (2002) <i>Hippocampus</i> 12: 609-636, Wiley, New York, USA
	Martin, S.J. et al. "Synaptic Plasticity and Memory: an Evaluation of the Hypothesis" (2000) <i>Annu. Rev. Neurosci.</i> 23: 649-711, Annual Reviews, Inc., Palo Alto, CA

Substitute for forms 1449A/PTO & 1449B/MTO		ATTORNEY'S DKT NO. 030708-075	APPLICATION NO. 09/403,724
O <b>FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		APPLICANT Sonderegger	
		FILING DATE Dec. 20, 1999	GROUP 1646

SEP 10 2003

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	Martinez, J.L. et al. "Long-term Potentiation and Learning" (1996) <i>Annu. Rev. Psychol.</i> 47: 173-203, Annual Reviews, Palo Alto, CA USA		
	Matsumoto-Miyai, K., et al. "NMDA-dependent proteolysis of presynaptic adhesion molecule L1 in the hippocampus by neuropsin" <i>J. Neurosci.</i> , in press. Society for Neuroscience, Washington DC, USA		
	Matynia, A. et al. "Genetic Approaches to Molecular and Cellular Cognition: a Focus on LTP and Learning and Memory" (2002) <i>Annu. Rev. Genet.</i> 36: 687-720, Annual Reviews, Palo Alto, California, USA		
	Molinari F., et al. "Truncating Neutrotrypsin Mutation in Autosomal Recessive Nonsyndromic Mental Retardation" (2002) <i>Science</i> 298: 1779-1781, Amer. Assn. For the Advancement of Science, Washington, DC, USA		
	Momota, Y., et al. "Blockade of Neuropsin, a Serine Protease, Ameliorates Kindling Epilepsy" (1998) <i>Eur. J. Neurosci.</i> 10: 760-764, Society for Neuroscience, Washington DC, USA		
OC	Morris, R.G.M. "Long-term Potentiation and Memory" (2003) <i>Phil. Trans. R. Soc. Lond. B</i> 358: 643-647, Royal Society of London, London UK		
	Morris, R.G.M. et al. "Selective Impairment of Learning and Blockade of Long-term Potentiation by an N-methyl-D-aspartate Receptor Antagonist AP5" (1986) <i>Nature</i> 319: 774-776, Nature Publishing Group, London, England		
	Muller, D. et al. "LTP, Memory and Structural Plasticity" (2002) <i>Curr. Mol. Med.</i> 2: 605-611, Bentham Science Publishers, Boca Raton, FL, USA		
	Nakagami, Y. et al. "Laminin Degradation by Plasmin Regulates Long-term Potentiation" (2000) <i>J. Neurosci.</i> 20: 2003-2010, Society for Neuroscience, Washington DC, USA		
	Nicole, O. et al. "The Proteolytic Activity of Tissue Plasminogen Activator Enhances NMDA Receptor-Mediated Signaling" (2001) <i>Nat. Medicine</i> 7: 59-64, Nature Publishing Group, New York, USA		
	Oliver, M.W. et al. "The Protease Inhibitor Leupeptin Interferes with the Development of LTP in Hippocampal Slices" (1989) <i>Brain Res.</i> 505: 233-238, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland		
	Patneau, D.K. et al. "Functional Correlates of Selective Long-term Potentiation in the Olfactory Cortex and Olfactory Bulb" (1992) <i>Brain Res.</i> 585: 219-228, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland		
	Pawlak, R. et al. "Rapid, Specific and Active Site-Catalyzed Effect of Tissue-Plasminogen Activator on Hippocampus-dependent Learning in Mice" (2002) <i>Neuroscience</i> 113: 995-1001, Elsevier Science Ltd, Great Britain		
	Qian, Z. et al. "Tissue-plasminogen Activator is Induced as an Immediate-early Gene During Seizure, Kindling and Long-term Potentiation" (1993) <i>Nature</i> 361: 453-457, Nature Publishing Group, London, England		
	Racine, R.J. et al. "Long-term Potentiation Phenomena in the Rat Limbic Forebrain" (1983) <i>Brain Res.</i> 260: 217-231, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland		

RECEIVED  
SEP 10 2003

Substitute for forms 1449A/PTO & 1449B/PTO		ATTORNEY'S DKT No. 030708-035	APPLICATION NO. 09/403,724
FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Sonderegger	
		FILING DATE Dec. 20, 1999	GROUP 1646

NON PATENT LITERATURE DOCUMENTS	
PATENT & TRADEMARK OFFICE Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	Rioult-Pedotti, M.-S. et al. "Learning-induced LTP in Neocortex" (2000) <i>Science</i> 290: 533-536, Amer. Assn. For the Advancement of Science, Washington, DC, USA
	Rioult-Pedotti, M.S. et al. "Strengthening of Horizontal Cortical Connections Following Skill Learning" (1998) <i>Nat. Neurosci.</i> 1: 230-234, Nature Publishing Group, New York, USA
	Ripka, W.C. "Design of Antithrombotic Agents Directed at Factor Xa. In: Structure-based Drug Design" (1997) (P. Veerapandian, Ed.), pp. 265-294. Marcel Dekker, Inc. New York
	Rongo, C. "A Fresh Look at the Role of CaMKII in Hippocampal Synaptic Plasticity and Memory" (2002) <i>BioEssays</i> 24: 223-233, Wiley Periodicals, New York, USA
	Sappino, A.P. et al. "Extracellular Proteolysis in the Adult Murine Brain" (1993) <i>J. Clin. Invest.</i> 92:679-685, Amer. Soc. For Clinical Investigation, New Haven, CT - '98 Thorofare, NJ 1999-
	Scarisbrick, I.A. et al. "Nervous System-specific Expression of a Novel Serine Protease: Regulation in the Adult Rat Spinal Cord by Excitotoxic Injury" (1997) <i>J. Neurosci.</i> 17: 8156-8168, Society for Neuroscience, Washington DC, USA
OC	Schafe, G.E. et al. "Memory Consolidation of Pavlovian Fear Conditioning: a Cellular and Molecular Perspective" (2001) <i>Trends Neurosci.</i> 24: 540-546, Elsevier Applied Science, Barking, England
	Schmidlin, F. et al. "Protease-Activated Receptors: How Proteases Signal to Cells" (2001) <i>Curr. Opin. Pharmacol.</i> 1: 575-582, Elsevier Science Ltd, Oxford, UK
	Seeds, N.W. et al. "Tissue Plasminogen Activator Induction in Purkinje Neurons After Cerebellar Motor Learning" (1995) <i>Science</i> 270: 1992-1995, Amer. Assn. For the Advancement of Science, Washington, DC, USA
	Shimizu, C. et al. "Characterization of Recombinant and Brain Neuropsin, a Plasticity-related Serine Protease" (1998) <i>J. Biol. Chem.</i> 273: 11189-11196, American Society for Biochemistry and Molecular Biology, Baltimore, MD, USA
	Shimizu, E. et al. "NMDA Receptor-dependent Synaptic Reinforcement as a Crucial Process for Memory Consolidation" (2000) <i>Science</i> 290: 1170-1174, Amer. Assn. For the Advancement of Science, Washington, DC, USA
	Shiosaka, S. et al. "Synaptic Microenvironments – Structural Plasticity, Adhesion Molecules, Proteases and their Inhibitors" (2000) <i>Neurosci. Res.</i> 37: 85-89, Elsevier Science, Ltd. England
	Silva, A.J. et al. "Impaired Spatial Learning in Alpha-calcium-calmodulin Kinase II Mutant Mice" (1992) <i>Science</i> 257: 206-211, Amer. Assn. For the Advancement of Science, Washington, DC, USA
	Soreq ,H. et al. "Plasminogen Activator in the Rodent Brain" (1981) <i>Brain Res.</i> 216: 361-374, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland
	Squire, L.R. et al. "Retrograde Amnesia" (2001) <i>Hippocampus</i> 11: 50-55, Wiley, New York, USA
	Stripling, J.S. "Selective Long-term Potentiation in the Pyriform Cortex" (1988) <i>Brain Res.</i> 441: 281-291, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland

RECEIVED  
PATENT CENTER 10/01/2003

## SHEET 6 OF 6

Substitute for forms 1449A/PTO & 1449B/PTO		ATTORNEY'S DKT NO. 030708-035	APPLICATION NO. 09/403,724
<b>FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		APPLICANT Sonderegger	
		FILING DATE Dec. 20, 1999	GROUP 1646

SEP 26 2003

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	Tomimatsu, Y. et al. "Proteases Involved in Long-term Potentiation" (2002) <i>Life Sci.</i> 72: 355-361, Pergamon Press, Oxford, England, New York		
	Vaillant, C. et al. "Spatiotemporal Expression Patterns of Metalloproteinases and Their Inhibitors in the Postnatal Developing Rat Cerebellum" (1999) <i>J. Neurosci.</i> 19: 4994-5004, Society for Neuroscience, Washington DC, USA		
	Wang, H. et al. "Inducible Protein Knockout Reveals Temporal Requirement of CaMKII Reactivation for Memory Consolidation in the Brain" (2003) <i>Proc. Natl. Acad. Sci. USA</i> 100: 4287-4292, National Academy of Sciences, Washington, DC, USA		
	Weber, P.C. et al. "Structure-based Design of Thrombin Inhibitors. In: Structure-based Drug Design" (1977) (P. Veerapandian, Ed.), pp. 247-264. Marcel Dekker, Inc. New York, USA		
OC	Wilhite, B.L. et al. "Functional Relations of the Rodent Claustral-entorhinal-hippocampal System" (1986) <i>Brain Res.</i> 365: 54-60, Elsevier/North-Holland Biomedical Press, Amsterdam, Holland		
	Yamaguchi, N. "Spinesin/TMPRSS5, a Novel Transmembrane Serine Protease Cloned from Human Spinal Cord" (2002) <i>J. Biol. Chem.</i> 277: 6806-6812, American Society for Biochemistry and Molecular Biology, Baltimore, MD, USA		
	Yamashiro, K. et al. (1997) "Molecular Cloning of a Novel Trypsin-like Serine Protease, Neurosin, Preferentially Expressed in Brain" <i>Biochim. Biophys. Acta</i> 1350: 11-14, Elsevier, Amsterdam, Holland		
	Yoshida, S., and Shiosaka, S. "Plasticity-related Serine Proteases in the Brain" (1999) <i>Int. J. Mol. Med.</i> 3: 405-409, D.A. Spandidos, Athens, Greece		
	Yuste R. et al. "Morphological Changes in Dendritic Spines Associated with Long-term Synaptic Plasticity" (2001) <i>Annu. Rev. Neurosci.</i> 24: 1071-1089, Annual Reviews, Inc., Palo Alto, CA		

Examiner Signature	<i>Maryland</i>	Date Considered	11/13/03
--------------------	-----------------	-----------------	----------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

RECEIVED  
TECH CENTER 1600  
SEP 8 2003